

IN THE CLAIMS

The following is a complete listing of the claims, and replaces all earlier versions and listings.

1. (canceled).

2. (currently amended): The method according to claim [[1]] 6, wherein said input step ~~inputs~~ includes inputting an image processing apparatus control code that employs YMC or color space information in a complementary-color relationship with YMC.

3. (canceled).

4. (currently amended): The method according to claim [[3]] 6, wherein said grouping step includes:

a first grouping step of grouping one or a plurality of drawing objects as one group area if a plurality of drawing objects exist;

a determination step of determining whether an ungrouped drawing object exists;

if an ungrouped drawing object exists, detecting whether said drawing object and the group area overlap;

if said drawing object and the group area do not overlap, a second grouping step of making said drawing object a new group area; and

if said drawing object and the group area overlap, an updating step of incorporating the area of said drawing object in the group area to thereby update the group area.

5. (canceled).

6. (currently amended): ~~[[The]]~~ An image processing method according to claim 5 comprising:

an input step of inputting an image processing apparatus control code;

a translation step of translating the image processing apparatus control code into a drawing object;

a judging step of judging whether rendering of the drawing object is to be performed in an RGB format or YMCK format;

a first rendering step of rendering a drawing object in one image, which has been obtained by translation at said translation step, in the RGB format, thereby creating an RGB image;

a second rendering step of rendering another drawing object in an image the same as said one image, which has been obtained by translation at said translation step, in the YMCK format, thereby creating a YMCK image;

a color conversion step of color-converting the RGB image to a YMCK image; and

an output step of outputting the YMCK image created by said second rendering step and the YMCK image obtained by the color conversion at said color conversion step,

wherein said judging step includes:

a grouping step of dividing a plurality of drawing objects into one or a plurality group areas; and

an attribute deciding step of dividing the group area into a group in which rendering is performed in the RGB format or a group in which rendering is performed in the YMCK format,

wherein said attribute deciding step includes:

a discriminating step of discriminating extent of a color difference that is produced by subjecting the group area to YMCK rendering;

if the color difference is outside an allowable range, a first attribute deciding step of adopting the group area as a group in which rendering is performed in the RGB format; and

if the color difference is within the allowable range, a second attribute deciding step of adopting the group area as a group in which rendering is performed in the YMCK format, and

wherein said attribute deciding step includes:

a third attribute deciding step of adopting the group area as a group in which rendering is performed in the YMCK format if a drawing object to be rendered in the RGB format does not exist in the group area;

a necessity determining step of determining whether it is necessary to render the group area based upon the RGB format if a drawing object to be rendered in the RGB format exists in the group area;

a fourth attribute deciding step of adopting the group area as an area in which rendering is performed in the RGB format if it is determined at said necessity determining step that it is necessary to render the group area in the RGB format; and

if it is determined at said necessity determining step that it is unnecessary to render the group area in the RGB format, a fifth attribute deciding step of adopting a drawing object that does not require rendering in the RGB mode in the group area as a new group area in which rendering is performed in the YMCK format, and adopting the remaining area as a group area in which rendering is performed in the RGB format.

7. (canceled).

8. (currently amended): The apparatus according to claim ~~[[7]]~~ 12, wherein said input means inputs an image processing apparatus control code that employs YMC or color space information in a complementary-color relationship with YMC.

9. (canceled).

10. (currently amended): The apparatus according to claim [[9]] 12, wherein said grouping means includes:

first grouping means for grouping one or a plurality of drawing objects as one group area if a plurality of drawing objects exist;

determination means for determining whether an ungrouped drawing object exists;

detecting means which, if an ungrouped drawing object exists, is for detecting whether said drawing object and the group area overlap;

second grouping means which is for, if said drawing object and the group area do not overlap, ~~is for~~ making said drawing object a new group area; and

updating means which is for, if said drawing object and the group area overlap, ~~is for~~ incorporating the area of said drawing object in the group area to thereby update the group area.

11. (currently amended): The apparatus according to claim [[9]] 12, wherein said attribute deciding means includes:

discriminating means for discriminating extent of a color difference that is produced by subjecting the group area to YMCK rendering;

first attribute deciding means which is for, if the color difference is outside an allowable range, ~~is for~~ adopting the group area as a group in which rendering is performed in the RGB format; and

second attribute deciding means which is for, if the color difference is within the allowable range, ~~is for~~ adopting the group area as a group in which rendering is performed in the YMCK format.

12. (currently amended): ~~[[The]]~~ An image processing apparatus according to claim 9 comprising:

input means for inputting an image processing apparatus control code;

translation means for translating the image processing apparatus control code into a drawing object;

judging means for judging whether rendering of a drawing object is to be performed in an RGB format or YMCK format;

first rendering means for rendering a drawing object in one image, which has been obtained by translation by said translation means, in the RGB format, thereby creating an RGB image;

second rendering means for rendering another drawing object in an image the same as said one image, which has been obtained by translation by said translation means, in the YMCK format, thereby creating a YMCK image;

color conversion means for color-converting the RGB image to a YMCK image; and

output means for outputting the YMCK image created by said second rendering means and the YMCK image obtained by the color conversion by said color conversion means,

wherein said judging means includes:

grouping means for dividing a plurality of drawing objects into one or a plurality group areas; and

attribute deciding means for dividing the group area into a group in which rendering is performed in the RGB format or a group in which rendering is performed in the YMCK format, and

wherein said attribute deciding means includes:

third attribute deciding means for adopting the group area as a group in which rendering is performed in the YMCK format if a drawing object to be rendered in the RGB format does not exist in the group area;

necessity determining means for determining whether it is necessary to render the group area based upon the RGB format if a drawing object to be rendered in the RGB format exists in the group area;

fourth attribute deciding means for adopting the group area as an area in which rendering is performed in the RGB format if it is determined by said

necessity determining means that it is necessary to render the group area in the RGB format; and

fifth attribute deciding means which is for, if it is determined by said necessity determining means that it is unnecessary to render the group area in the RGB format, ~~is for~~ adopting a drawing object that does not require rendering in the RGB mode in the group area as a new group area in which rendering is performed in the YMCK format, and adopting the remaining area as a group area in which rendering is performed in the RGB format.

13. (currently amended): A computer-readable medium storing a computer program for causing a computer to implement the following procedures:

an input procedure for inputting an image processing apparatus control code;

a translation procedure for translating the image processing apparatus control code into a drawing object;

a judging procedure for judging whether rendering of the drawing object is to be performed in an RGB format or YMCK format;

a first rendering procedure for rendering a drawing object in one image, which has been obtained by translation in said translation procedure, in the RGB format, thereby creating an RGB image;

a second rendering procedure for rendering another drawing object in an image the same as said one image, which has been obtained by translation in said translation procedure, in the YMCK format, thereby creating a YMCK image;

a color conversion procedure for color-converting the RGB image to a YMCK image; and

an output procedure for outputting the YMCK image created by said second rendering procedure and the YMCK image obtained by the color conversion in said color conversion procedure,

wherein said judging procedure includes:

a grouping procedure of dividing a plurality of drawing objects into one or a plurality group areas; and

an attribute deciding procedure of dividing the group area into a group in which rendering is performed in the RGB format or a group in which rendering is performed in the YMCK format,

wherein said attribute deciding procedure includes:

a discriminating procedure of discriminating extent of a color difference that is produced by subjecting the group area to YMCK rendering;

if the color difference is outside an allowable range, a first attribute deciding procedure of adopting the group area as a group in which rendering is performed in the RGB format; and

if the color difference is within the allowable range, a second attribute deciding procedure of adopting the group area as a group in which rendering is performed in the YMCK format, and

wherein said attribute deciding procedure includes:

a third attribute deciding procedure of adopting the group area as a group in which rendering is performed in the YMCK format if a drawing object to be rendered in the RGB format does not exist in the group area;

a necessity determining procedure of determining whether it is necessary to render the group area based upon the RGB format if a drawing object to be rendered in the RGB format exists in the group area;

a fourth attribute deciding procedure of adopting the group area as an area in which rendering is performed in the RGB format if it is determined at said necessity determining step that it is necessary to render the group area in the RGB format;
and

if it is determined in said necessity determining procedure that it is unnecessary to render the group area in the RGB format, a fifth attribute deciding procedure of adopting a drawing object that does not require rendering in the RGB mode in the group area as a new group area in which rendering is performed in the YMCK format, and adopting the remaining area as a group area in which rendering is performed in the RGB format.

14. (canceled).